city designer 2

User's Guide

ProFantasy Software

PROFANTASY SOFTWARE PRESENTS

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INTRODUCTION

City Designer 2 (CD2) is an add-on for CC2 that allows you to create urban areas from all genres. It has a huge range of smart symbols (over 1,500) ranging from primitive to futuristic and fantastical. It has features to add custom buildings and even whole streets. A powerful index function lets you add a hyperlinked, alphabetical list of text in any map.

At the individual building level

- ✓ You can create custom shaped buildings in many pre-set styles. The styles include shading, which can be swapped around on the fly, roof hatching (such as Thatching) and custom roof edges.
- ✓ Add your own building styles with combinations of colors, roof edges, hatching, roof overlap and other features.
- ✓ Add frills such as dormers, chimneys and extensions to the pre-defined symbols and custom buildings.
- ✓ CC2's city symbols and frills are "smart". Buildings will align themselves to roads then offset from the road. Staircases lock to building edges, dormers to roofs.

At the street level

- ✓ Road networks are very easy to create.
- ✓ CD2 will create random streets using a large set of parameters that you control. Select from all the house styles you have defined at the building level.
- ✓ CD2 has grids that you can align with roads, making house creation along roads very easy.

Demographic Information

- ✓ CD2 will add an easily controlled labeled grid to you map.
- ✓ CC2 will extract text such as street names and add it to the map with its grid coordinates. Click on the label to zoom to the text.
- ✓ CD2 will color your building symbols so that if you hide the correct layers, you can see what all the buildings are for. This information can be concealed from your players; while maintaining the beautiful appearance of you map.

Latest Information

To find out about any additions to CD2 since this manual was written, double-click the Readme icon on the CD. Latest information including patches and technical support are available at www.profantasy.com.

What you need to know to use City Designer 2

This manual assumes that you understand the basics of using CC2. In particular you need to know:

- ✓ How to start, save and print maps.
- ✓ How to add entities to a drawing.
- ✓ How to choose entities for editing (entity selection).
- ✓ What properties are (color, line width etc) and how to set them for new entities and change them for existing entities.
- ✓ How to insert symbols.
- ✓ How to use layers.
- ✓ How to use grid, snap and attach modes.

Installing City Designer 2

Place the CD2 compact disc into your CD-ROM drive, On most computers there will be a few seconds of whirring, then you will see a window showing the contents of the CD. If this doesn't happen, double-click on "My Computer", then on the icon for your CD-ROM drive.

To install CD2, double-click on the Setup icon, then follow the on-screen instructions.

Please make sure that if you have Dungeon Designer 2, it is installed first. If you install DD2 later, you will need to re-install CD2 after.

During the installation you will be asked to give your name, company and CD2 Serial number. Your unique serial number is on the back of the CD case. If the company box is blank, you will have to enter something, even if it is only one character!

CC2 v. 6 Upgrade included with City Designer 2

City Designer 2 includes a free software upgrade to CC2 version 6. To find out about the new features you've got, look up "Version 6" in CC2's Help index.

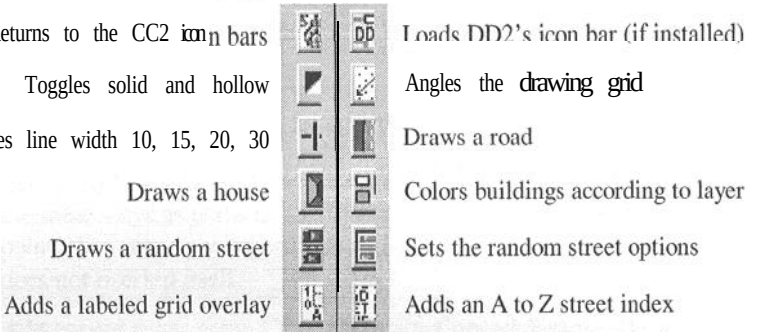
If you want the new version 6 manual to accompany the software (170 pages, with a pearl of wisdom on every one), you can order it from our web site or, in the USA, by calling l-800-841-1487.

Starting City Designer 2

After you have installed CD2, start CC2 and click on the CD2 icon on the right icon bar, or select File Menu >> City menu. You can see a new set of icons and a new menu.

City Icons

These icons are normally found on the right icon bar. If you can't see them, select the **Tools** icon and ensure that Right Icon bar 1 and 2 are ticked. Most of CD2's features are accessible from the icon bar.



Start a new city

1 Select File Menu >> New or click

You see a new map, based on the 1000 x 800 (uses sheets) city template.

> CD2 comes with new city templates, stored in CC2's Templates\Cities folder. To select a template, use File Menu >> Select Template or click .

ROADS AND STREETS

CD2's Road icon and City Menu >> Curved Road add paths or smooth paths to your drawing to represent roads. You can add any entities you want to represent roads, but CD2 has short cuts to make it easier.

1 > Set a road width using the Road Width toggle . Keep clicking on this icon and see the line width on the status bar increase, starting at 10 then 15,20,30 and finally 10 again.

2 > Add straight roads using the Road icon . These are added in exactly the same ways as paths or roads on an overland map. Select a start point, then other points, and right click to finish. Make sure the road does not overlap itself.

3 > Add curved roads using City Menu > > Curved Roads. These are added in the same way as smooth paths or rivers on an overland map. Again, select points, right click to finish, don't let the road overlap itself.

When you add roads, don't worry if they go over the edge of the map border; you can Front the map border at the end.

> The Road commands in CD2 add roads to the ROADS 1 layer. If you prefer, you can add them to any other layer. Start a road command, click on the layer indicator then choose another layer. Continue drawing.

Custom roads

CD2's smart symbols will align to most CC2 entities. You can then therefore draw custom roads as follows:

1 > Click the Layer indicator and select a current drawing layer (usually ROADS, ROADS 1, ROADS 2 or ROADS 3).

2 > Click the fill style toggle .

The Fill Style indicator toggles between Hollow and Solid. Choose Solid. You can use symbol fill styles if you want, but it is better to add these later instead.

3 > Select the Line Width indicator and type in a width for your road.

You are now ready to use any entity to add roads (other than ellipses and elliptical arcs). Use paths, smooth paths, circles, arcs, and boxes.

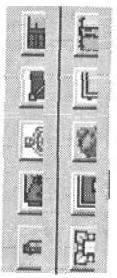
Other road-like areas

You can add squares and other straight-edged solid tilled areas by using a solid polygon with a line width of 0. You can add circular areas using a solid filled circle with a line width of 0.

Selecting City Symbol catalogs

These icons open CD2's new symbol catalogs and set an appropriate house setting (more on this later). Each icon can open more than one catalog, just click on the icon a second or third time to open new catalogs. For example click on the Orcs/Halflings/Elves icon to open the Orcs catalog, click again for the Halflings catalog and once more for the Elves catalog. Clicking again takes you back to Orcs

Default/ Miscellaneous



Gothic/Thatched

Fantasy/Hovel

Classical/Middle East

Igloos/Nomads

Orcs/Halflings/Elves

Modern Blue/Grey/Red

Futuristic/Cyberpunk/Moon

Vehicles/Roads

Skyscrapers/Modern

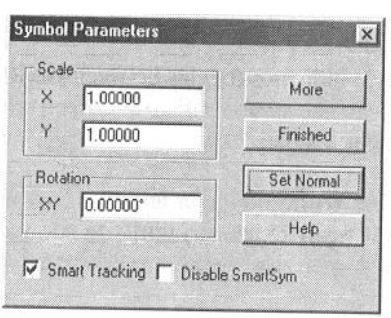
You can also access City catalogs by clicking on the Catalog... button then choosing a file from the *Symbols/Cities* folder.

Smart Symbols

City Designer 2 makes use of *smart svmbols.* These are symbols that align to roads and then offset from them, making sure that your houses are placed accurately without much effort.

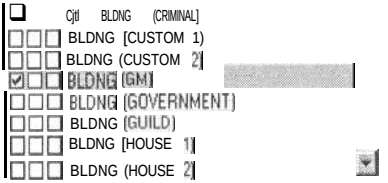
To enable smart symbols: Right click when inserting a symbol and uncheck Disable SmartSym.

To enable smart tracking: When smart symbols are in operation, CC2 must check to see if the symbol cursor is over another entity. This can take some time if you have a large drawing. If you find that the symbols are moving too slowly, you can disable the automatic alignment of the smart symbol cursor, To enable, right click when inserting and check Smart Tracking.



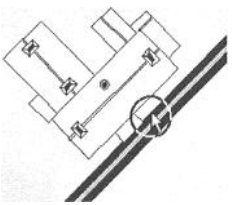
Adding a smart symbol aligned to a road

1 > Choose a layer before adding your symbols. This should be one of the BLDNG layers.

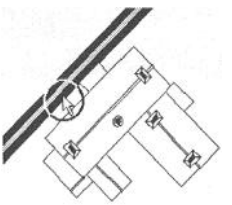


2 > Select a CD2 symbol catalog either using the CD2 catalog icons or by selecting the Catalog . . , button then choosing a city catalog.

3 > Select a building. Move the building over the map. Notice that whenever a building crosses a road it aligns to the road.



Arrow cursor on north side of road.



Arrow cursor on south side of road.

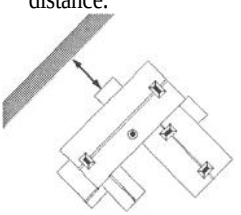
4 > Choose a road and hover the building over the road. As you move the cursor slightly away from the center of the road, the building "flips" to that side of the road.

5 > Click to establish the position along the road.

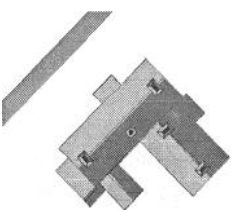
The prompt reads `Offset from place point [40]:`.

As you move the cursor, the building now moves perpendicular to the road on a cursor.

6 > Select a point, type in a distance, or press the right button to accept the default distance.



Place point then slide the symbol perpendicular.



7 > Select another symbol. Select a point on the road again, making sure that the cursor is on the same side as before. Right click. The symbol is placed an identical distance from the road.

Adding symbols without automatic aligning

As an alternative to automatically aligning symbols, you can align them manually then place them by eye.

1 > Disable smart symbols and the smart symbol cursor by selecting a symbol, right clicking then setting the options as below.

Symbols will no longer automatically align to other entities.

2 > (Optional)Select City Menu >> Lock symbol angle. Choose a straight road to which you want to align the symbols.
The symbol angle is now locked in the direction of the road.

3 > Start placing symbols.

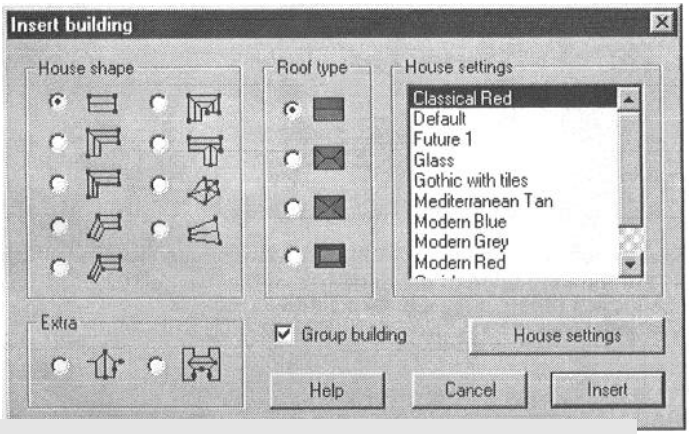
The House Builder

Although CD2 has over 1,500 symbols, buildings come in all sorts of shapes and sizes – more than any number of symbols can cover. CD2's House lets you create a variety of custom-shaped buildings in a selection of styles. You can also add extensions to individual houses or connections, which join houses together. You can combine symbols and Houses on the same map.

You can start inserting houses by selecting the House icon , or by selecting City Menu >> House.

The House dialog box

When you click House, you see the House dialog box. All the settings are saved between houses.



House shape: Controls the footprint of the building and gives you an idea of how the house will look. Select one option from here, or alternatively choose and extension or connection.

Extra: These shapes are for drawing an extension or connection to an existing house or symbol, instead of a whole new house.

Group building: Check this option if you would like your building to be treated a single entity (recommended).

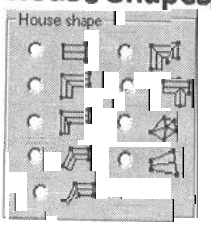
Roof Type: Choose an option here to determine the appearance of the building's roof.

House settings: (List) Choose a pre-defined setting from this list to determine the color, hatching, shading and roof edge characteristics of you buildings. When you select a catalog icon, it chooses an appropriate House Setting for you.

House Settings: (Button) Click the House settings button to edit house settings and add new ones.

Insert: Starts a new building with the current house dialog box settings.

House Shapes

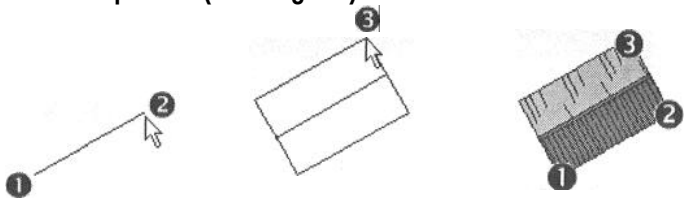


The House dialog box gives you nine base house shapes which allow you to create a wide variety of building outlines.

And if these shapes aren't enough, you can expand on any shape with extensions and connections to neighboring buildings.

The current house shape is remembered between houses.

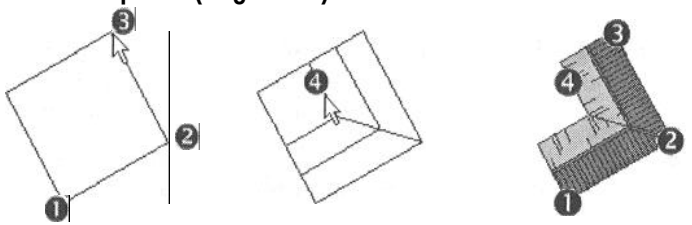
House Shape 1 (Rectangular)



This simple shape is the basis for most houses,

Select 3 points to produce a rectangular house at any angle. The first two points are the long edge of the dark side of the house. The third point defines the depth of the house.

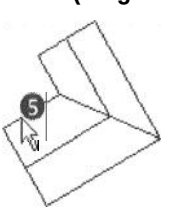
House Shape 2 (Regular L)

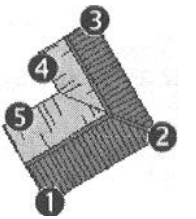


This shape produces L-shaped houses with the same width for both sections.

The first two points are the outside edge of the first section, the third point forms a rectangular cursor in which the L is enclosed; the final point sets the inside corner of the L.

House Shape 3 (Irregular L)

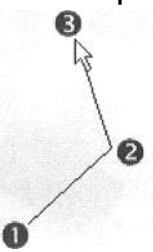


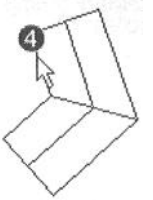


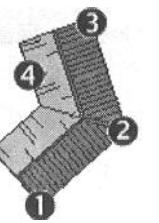
This shapes produce and L-shaped house with the option for a different width for each section.

As with House Shape 2, the first three points define the outside of the L. The fourth and fifth points define the width of the two sections.

House Shape 4 (Regular V)



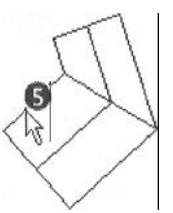


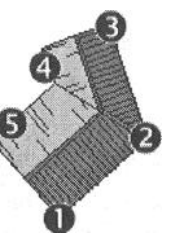


This shape produces V-shaped houses with the same width for both sections. You draw it just like a Regular L, except the angle between the roofs isn't locked to 90".

The first two points are the outside edge of the first section; the third point is the third point of the outside of the V. The fourth point selects the inside of the V.

House Shape 5 (Irregular V)

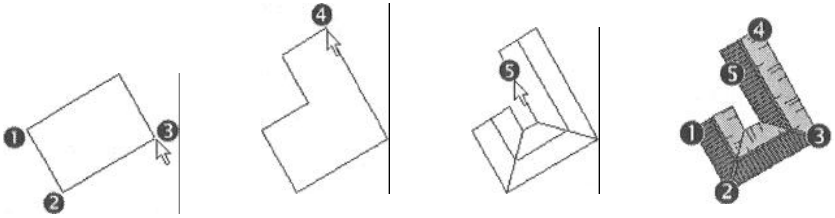




This shape produces V-shaped houses with the option for a different width for each section.

As with the Regular V-shaped house, the first three points define the outside of the V. The fourth and fifth define the width of the two roof sections.

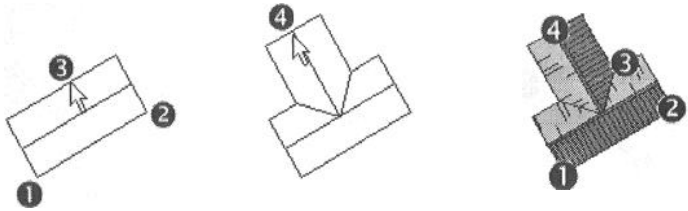
House Shape 6 (Irregular U)



This shape produces a U-shaped house.

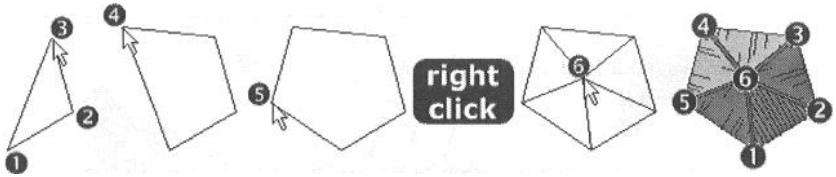
The first four points define the outside of the U, the fifth point defines the width of all the roof sections.

House Shape 7 (Irregular T)



This shape produces a T-shaped house. The first two points describe the length of the T's top bar; the third determines the width of the roofs, the last point the position of the upright.

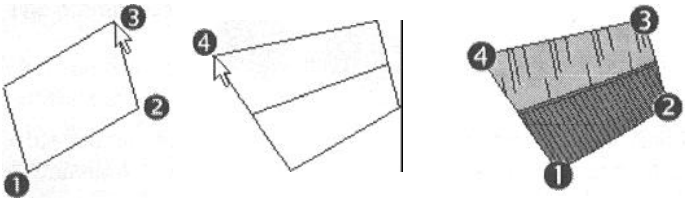
House Shape 8 (Many sided)



This shape produces a polygonal house with as many sides as you like. It is particularly useful for orc huts or nearly round buildings.

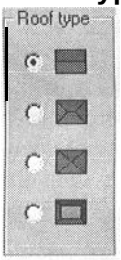
Place as many points as you want to determine the outside edges of the house. When the outline is complete, right click then select the roof vertex. This shape is unaffected by roof types other than flat roof.

a **House Shape 9 (Four-sided)**



This produces an irregular four-sided house with no constraints. The first two points are the long edge of the dark side of the house. The third and fourth points determine the other two corners of the house.

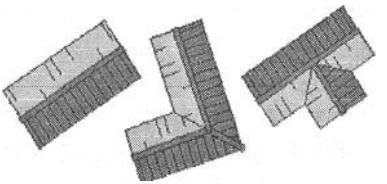
Roof Types



There are four Roof types in the House dialog box to control the appearance of the roof inside the building's boundaries.

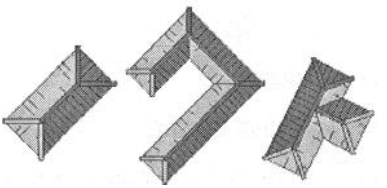
The current roof type is remembered between houses.

Roof Type 1 (Gabled)



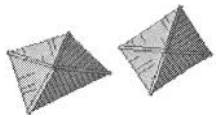
The first type creates houses with a sloping roof, which has gables. This roof type affects all house shapes apart from the many-sided roof. A gable is the angled section in a wall between roof sections.

Roof Type 2 (Hip Roof)



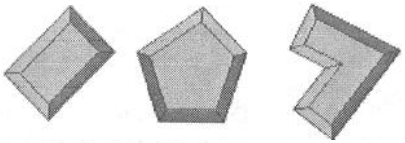
This creates a roof with a Hip roof instead of a gabled roof. The angle of the hip is determined by the current Roof Options for this type on the House Settings dialog box. A hip roof is one that slopes up from a wall on all sides, rather than having a gable.

Roof Type 3 (Central Point)



This only affects the basic house shape (shape 1) and the four-sided irregular house type (shape 8). It creates a roof that slopes up on four sides to a central point. Other house shapes give a Hip Roof.

Roof Type 4 (Flat Roof)



This creates a house with hip roof edges sloping up to a flat area. It works with all house shapes. The color of the roof is controlled by the Flat Roof Color of the current house setting. The distance between the edge of the roof and the flat area is controlled by the Roof Options for this type in the current house settings. This can be used to make Arabic style buildings, skyscrapers and houses with roof gardens.

Matching the roof type of symbols

When you add houses to the drawing, you are usually adding them in addition to symbols from the catalog. The House dialog box contains pre-defined house settings to help you match the symbols, however, you should also check that you are matching the roof type as well. For example, the Modern Blue catalog uses Hip roofs, so you should set the roof type to Hip Roof before inserting the symbols.

Toaddahouse

1 > Click the Layer indicator and choose a drawing layer. This should be one of the BLDNG layers.

2 > Click the House icon or City Menu >> House.

3 Select a House shape.

4 > Choose a suitable House setting,

5 > Select a roof type from the Roof type group box,

The House setting name might suggest a particular Roof type, for example, with the Mastaba (use flat roof) house setting you should use a use a flat roof (the bottom roof type).

6 9 Click the Insert button
Thepromptreads `First house point:`.

7 9 Select the first corner of the house. You will be asked for more points until the house is complete. The exact number of points depends on the houseshape. The first two points always define a long edge along the dark side of the roof.
When the house is complete, the prompt reads `First house point (S=Swap colors, E=Extension, C=Connection)` :.

8 9 At this point you can:

- Press S a number of times to swap the colors around. The number of combinations depends on the current House Settings;
- Press ❑ to add an extension to the house,
- Press ❑ to connect the house with another house
- Select a point to start a new house of the same type.
- Right click to finish.

Align Houses with Roads using Grid Angle

CD2's symbols automatically align to roads. You also have that option with Houses. By changing the angle of CC2's grid you can draw houses precisely along roads.

Usually, CC2's grid is aligned horizontally and vertically. CD2 adds the option to angle the grid to make it easy to draw buildings parallel to roads when snap is on.

Only CD2's pre-defined angular grids may be aligned. All CD2 maps include angular grids. You can add angular grids to any map.

Angling the grid

1 > Click the Grid Angle icon or City Menu >> Grid Angle.
Thepromptreads `Angle or select entity:`.

2 > You can:

- **Either** type an angle for the grid alignment. The command finishes.
- **Or** click a point. If the point is on an entity, CD2 will snap to it. The Command Line reads `bearing to :` .

3 > Select a second point. If the point is on an entity, CD will snap to it. The grid is now aligned.

If you try to align a non-angular grid, a message box says "The currently selected grid is not an angular grid".

An example

The most common use for this command is to make the grid lie parallel to a road, then draw houses along the road.

1 > Bight click on the Grid button, choose an angled grid such as 20' angled, 1 snap.

2 > Click the Grid Angle icon then select two points on a straight road. The grid now runs parallel to the road.

3 > Select Options Menu >> Drawing Aids >> Align Grid.
This moves the grid so that a grid point is on a selected point. This way you can move the grid so that the fronts of your houses are the correct distance from the road.

4 > Click a point, usually in the center of a road.

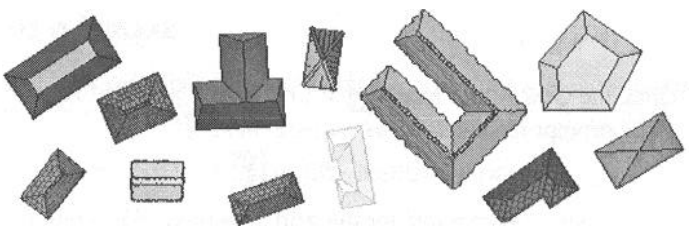
5 > Enable Grid, Snap and CsrSnap on the button bar.
Pick a grid with snap points suitable for the size and type of houses you are drawing. A grid with snap points every 5' is about normal. For primitive, higgledy-piggledy buildings, a 1' snap would be better.

6 > Click House and draw a house along the edge of the road.

To change the layer of a house

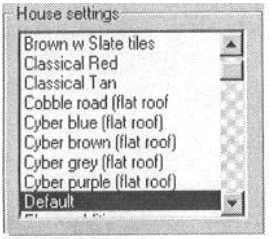
Because houses span many layers, changing the layer of a House using Change Layer will prevent certain of CD2's features working. Always use City Menu >> Change house layer instead.

House Settings



House Settings are pre-defined sets of roof hatching, roof edges colors, and other parameters that determine the "look" of a building. You can choose from one of the pre-defined settings on the House dialog box, or create your own styles. This section tells you how to choose settings; you can design your own.

Getting to the house settings



- To choose a pre-defined house setting, select one from the scroll box on the House dialog box.
- When you select a catalog icon, suitable house setting is selected for you.
- To edit an existing house setting, or add a new one, either select House Settings from the City menu, or select the House Settings button from the House dialog box.

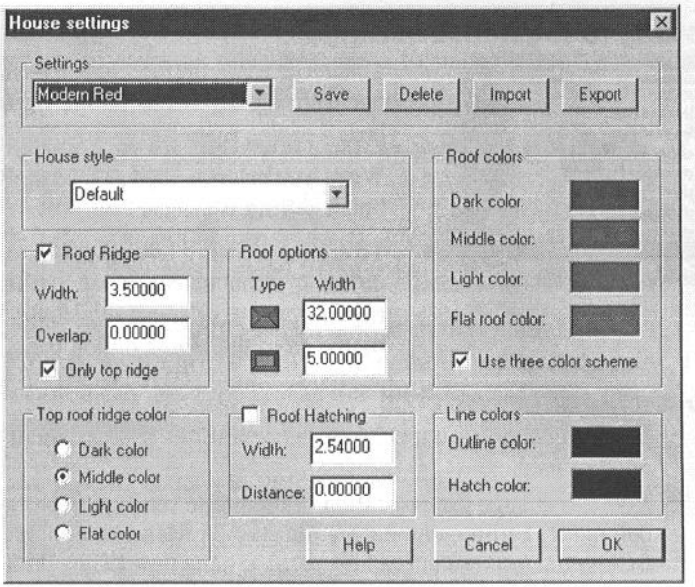
House Settings features

- ✓ You can export or import your house settings to share them with another user.
- ✓ You can change the coloration of the house setting, using two or three colors for shading, one for the flat roof type, and others for the hatch coloration and roof edges.
- ✓ You can include a hatch pattern, irregular roof edges and roof ridges. These are either the default, or can be defined in special "House Style" files.
- ✓ You can control the width, number, overlap and coloration of roof ridges.
- ✓ You can control the angle of the Hip Roof shape.
- ✓ You can control the distance from the edge of the Flat Roof style.

House Settings dialog box

This section gives an overview of the house setting dialog box; each area is described in more detail in the sections following.

The House Settings dialog box is where you edit house settings and add new ones. You can change colors in the dialog box by clicking on the colored box then selecting a new color. If you select color 3 1, this will appear as the current color when a house is inserted. When you have finished editing the settings, remember to select the Save button.



Settings: Pull down the list to edit a new house setting.

Save: Saves the current settings. Type a name or select the default (current), select **OK**.

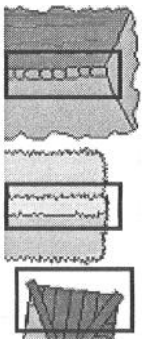
Import: Imports another user's saved house style settings and files. Choose an HSS file, then select overwrite options.

Delete: Select this button to delete the current house saved setting.

Export: Exports all your house settings and house style files to an HSS file. Other users can then import it.

House Style: Pull this list down to select a House Style file from the **Symbols\Cities\House Styles** folder. If you want straight edged and ridged houses, select **Default**. House styles determine.

- ✓ The appearance of the edge of the outline of a building (straight, jagged, wibbly)
- ✓ The style of the roof ridge (rectangular, a single block, like Thatched, or a row of tiles like Gothic)
- ✓ The appearance of the internal lines of a house (straight, jagged, wibbly)
- ✓ The Roof Hatching style, which can be different for the Flat Roof area and the Medium, Dark and Light colored areas of the roof.

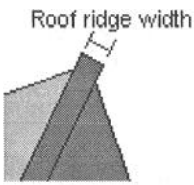


Roof Ridge

The roof ridge is a repeating shape that runs along the internal roof boundaries. You can exclude a roof ridge altogether, or have only a top roof ridge. When created with the Default house style, roof ridges are filled rectangles. Other house styles have different roof ridges.

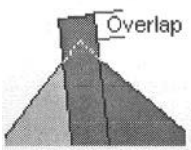
If you want a roof ridge, select the **Roof Ridge** check box; otherwise uncheck it and don't worry about the other roof ridge options. If you only want a top ridge, select the **Only top ridge** tick box.

The current House Style also controls the appearance of roof ridges.



Roof Ridge: Width

Type a value in the **Width** box to specify your the width of your roof ridge,



Roof Ridge: Overlap. Type a value in the **Overlap box** to specify your the overlap of your roof ridge.

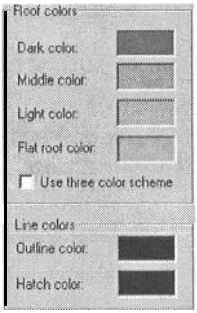
Top roof ridge color. The color of the top roof ridge. The colors refer those in the in the **Roof Colors** area.

Roof Options

These specify the appearance of houses when a Hip Roofor Flat Roof type is selected.

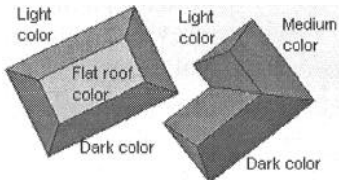
Width sets the angle of the slope. It is measured as a percentage of the roof half-width. 100 gives an angle of 45".

Flat Roof Width is the offset of the flat roof from the roof edge.



Roof Colors

Buildings created with the House dialog box have a wide variety of color options, selected from the **Roof Color** and **Line Color** group boxes.



Change any colors by clicking on a colored area on the dialog box, selecting a color from the color dialog box, then choosing **OK**.

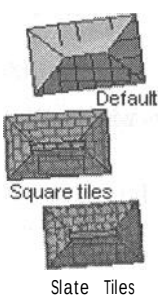
If you choose to **Use three color scheme**, the roof shading will include all three colors. The **Flat roof color** is only relevant if you are using the flat roof type.

As well as controlling the solid filled areas, you can also control the outlines.

Line Colors: Outline color is the color of a building's edges and internal lines.

Line Colors: Hatch color is the color of any roof hatching found in the current house style.

Roof Hatching



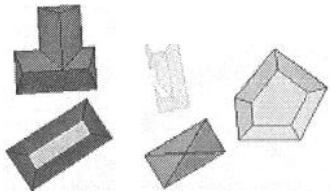
Houses can optionally have fill patterns on top of the solid roof colors. The style of the roof hatching depends on the currently selected House Style. You can have different roof hatching for the Dark, Middle and Light and Flat Roof areas of the roof.

Roof hatching is best confined to small maps, as it increases the size of maps considerably.

Roof Hatching: Width. For the Default house style, this controls the gap between each hatch line. For other styles, it is a scale for the hatch pattern, usually 1.

Roof Hatching: Distance. This is the distance between the roof outline and the hatch pattern, This is usually 0. It does not affect the Default fill pattern.

Creating House Settings



It is very easy to create House Settings. You can then save these and then re-use them in a later session.

Most House Settings are based on the Default house style, which is hard-coded into CD2. It creates straight-edged houses with an optional simple hatching pattern,

To create a basic house setting from scratch

1 > Select City Menu >> House Settings.
You see the House Settings dialog box.

2 > Pull down the Settings list and choose a style similar to the one you are making. Select Save and choose a new name.

3 > Pull down the House Styles list and select a house style. Most often, this will be Default.

4 > Choose your Roof Colors.

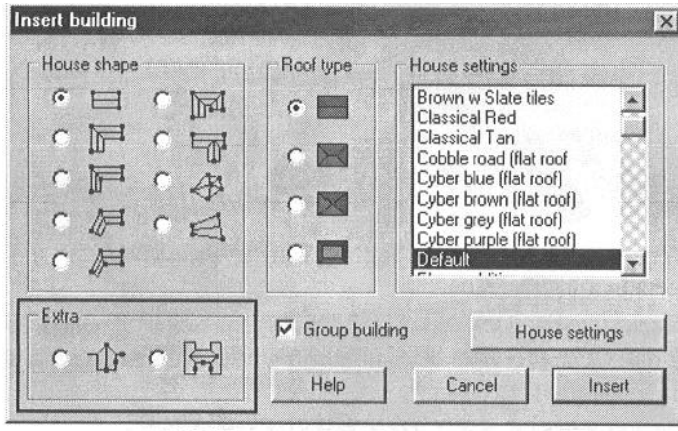
5 > Choose your Roof Ridge options and

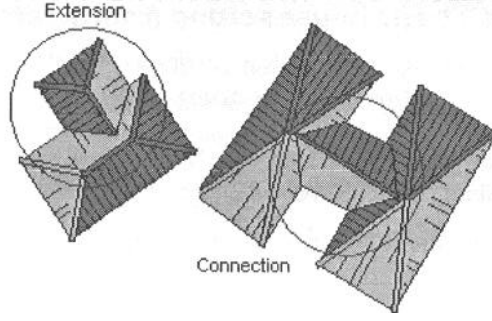
6 > Enable Roof Hatching if you want it.

7 > Select the Save button.

You can test your new House Setting at anytime during this process, select OK, then insert a house. Make changes, remembering to save each time.

Extras - Extensions and Connections





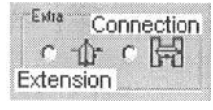
Extensions and connections are special house shapes that extend a house or connect two parallel houses together. They can be added to houses or symbols. They can be used to create house shapes not included in the standard shapes (like H-Shaped and Cross-shaped).

You must add Extensions and Connections to existing houses. They can be selected from the House dialog box and be added to an existing building, or they can be added in the middle of a House command to a building that you have just finished.

To start an Extra from the dialog box

1 > Select the House icon or City Menu >> House.

2 > Select either the Extension or Connection radio buttons



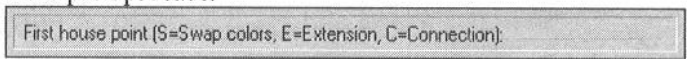
3 > Choose a Roof Type and House Setting to match the house you wish to extend.

4 > Select the Insert button.

To start an extra just after adding a house

1 > Add the house using the house dialog box.

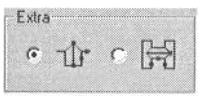
2 > When the prompt reads:



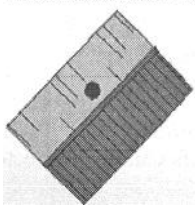
3 > Press E to add an extension in the current style and C to connect two houses.

Adding Extensions

Any house or house symbol with a none-curved edge may have an extension added to it.

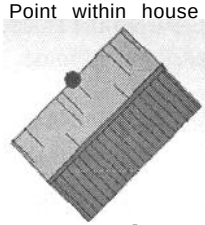


1 > First start the Extension, either from the House dialog box or with E just after adding a house.



Point within house

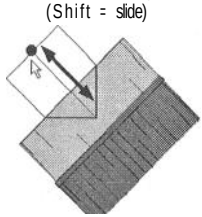
2 < Select a point within the house where you would like the "point" of the extension to appear.



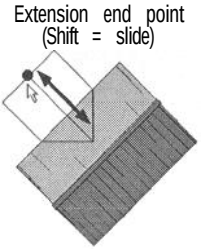
House edge

3 < With the pick box, select a point on the house edge.

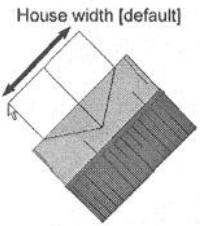
Extension end point (Shift = slide)



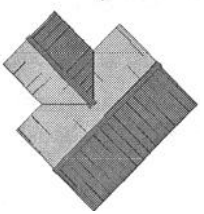
4 < Use the mouse and cursor to increase and decrease the length of the extension. If you want you can press Shift and move the mouse to slide the extension along the roof edge. When you are ready, select a point by left clicking.



5 < Choose a point to determine the extension width, or right click to accept the default width. (This is distance from the "point within house" to the "house edge".)



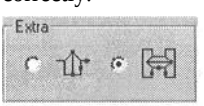
6 < Choose a point to determine the extension width, or right click to accept the default width. (This is distance from the "point within house" to the "house edge".)



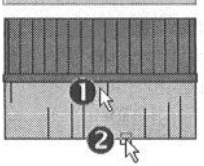
7 < You can now press the right button to finish the extension, press S to swap the colors, press E or select another point to start an extension, or press C to start a connection.

Connecting houses

Houses may be connected with a stretch of roof called a connection. Only houses that are relatively close together with parallel roofs can be connected correctly.

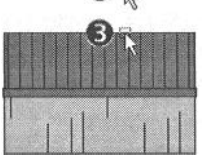


1 < First start the Connection, either from the House dialog box or with C just after adding a house.

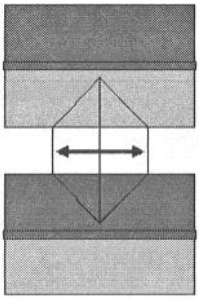


2 < At the `Point within house` prompt select a point inside the roof of the first house (marked 1).

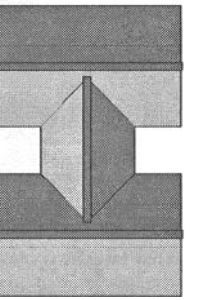
3 < At the `House edge` prompt, select the edge of the first house, nearest the second house (marked 2).



4 < At the `Next house edge` prompt, select the edge of the second house (marked 3).



5 < At the House width[default]prompt, either select another point, right click to choose the default width (previous) or type in a width. The connection is drawn.



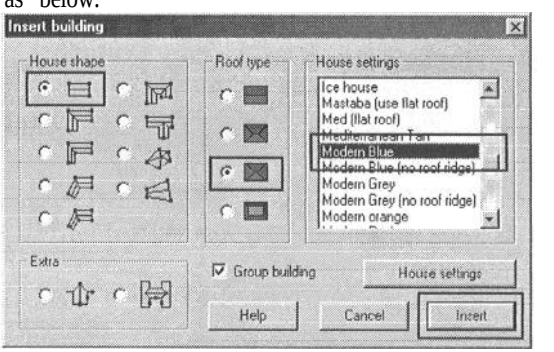
Swapping colors

CD2 houses sloping roofs can have up to three colors. The position of these colors can be "swapped" in mid House command to make sure that the shading looks correct. The colors are called the Dark, Medium and Light colors. The actual colors used depend on the roof colors in the current House Settings. The Medium color is optional and depends on whether the 3 color scheme tick box is checked in the current House Settings.

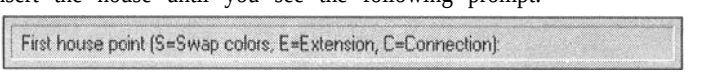
When you first draw a house, the first edge you select is the long edge of the darkest side of the house.

scheme example

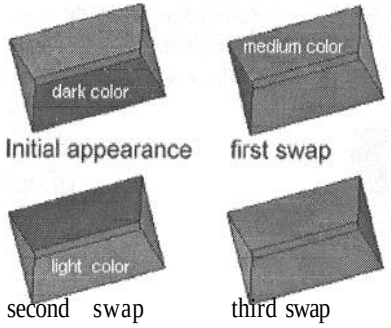
1 > Start drawing a house by selecting the House icon . Choose a Modern Blue House Setting (which uses a three-color scheme) with the settings as below.



2 > Insert the house until you see the following prompt:



3 > Press S. See how the color scheme changes. Press S again a few times.

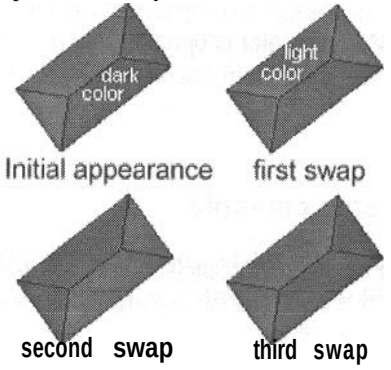


The house shading cycles through four permutations.

2-color scheme example

1 > Start a house with the dialog settings as in the previous example, but use the Classical Red house setting.

2 > At the swap prompt, press the S key a few times.



NOTE: It is possible to affect the swap color order and mapping. See the Mappings.fcw in the CC2 System folder for more details.

Adding Random Streets

Random Street adds a line of buildings **to** your city. These can be placed in a straight line or along a straight or curved roads. The exact appearance of the road is random, but you can control the parameters from the Random Street Options dialog box. Once you've made the street you can add, remove and edit houses as normal.

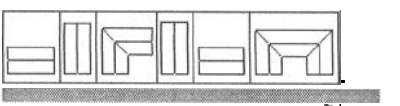
To add a random street

1 9 Click Random Street or select City Menu >> Random Street.
The prompt reads `First end of street` and you can see a pick box.

2 9 Select the center of a road. If you miss, you will be able to add a street in a straight line, not along a road.
Thepromptreads `Pick start position [nearest endpoint]:`.

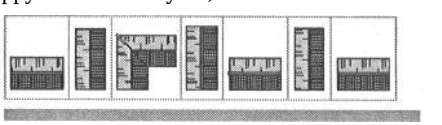
3 9 **Either** right click to start the street near the endpoint or the entity you selected **or else** select a point on the entity where you want the street to start.
The prompt reads `Second end of street:`. You can see a dynamic cursor that shows you what the street could look like.

4 9 Move the mouse up and down the street, noticing that each time you get a slightly different selection of building types.



Slide the mouse up and down to see different random streets.

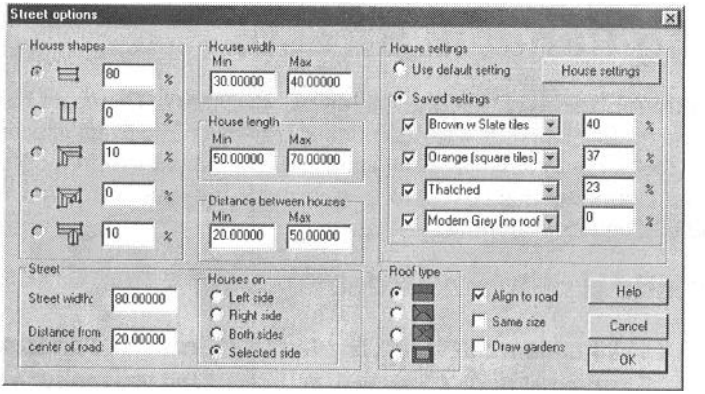
5 9 When you are happy with the layout, left click to select an endpoint.



The prompt reads `First end of street:` again.

Random Street Options dialog box

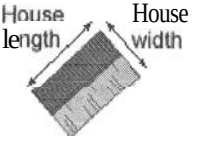
The Random Street options control the appearance of streets created with the Random Street command. Settings here are saved between sessions. Note that certain settings will produce impossible houses in your street.



House Shapes This group box determines the percentage of each type of house shape along the road. Type in percentage values starting from the top and going down the list.

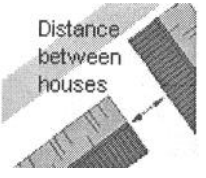
Houses On This sets the side of the road that the houses appear on when you use the Random Street command. **Left side**, **Right side** and **Both sides** are obvious, **Selected side** allows you to choose the side when creating the street.

House width
House length



Type in a maximum and then a minimum value to give a range for the size of random houses. The minimum value for length should be greater than the maximum value for width. These settings are overridden if you select the **Same Size** option.

Distance between houses



Type values here to give a range for the distance between the houses in your street. If you want a terrace, type 0 in both the maximum and minimum.

Roof Type Choose which roof type you would like for the houses in the street.

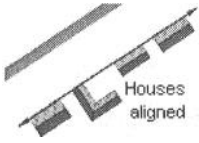
House Settings button. Takes you to the House Settings dialog box where you can change and add to the available house settings.

Use Current Settings radio button. If you set this option, the appearance of all the houses for the random street will be determined by the current house setting, otherwise, the **Saved Settings** will be used.

Saved Settings radio button. If this radio button is checked, the appearance of all the houses for the random street will be determined by the settings in the pull down lists and their percentages.

Saved Settings pull down lists. Check the check box for each house setting that you would like included in your street. Pull down the list to select the type. Type in percentages from top to bottom.

Align to road



Select this check box if you would like the roadside faces of the houses to be equidistant from the road.

Same size

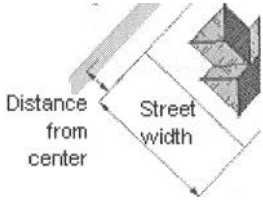
Check this button if you would like identical sized and shaped houses. The house will have random styles if the **Saved Settings** button is set. They will be the average width, length and distance apart of the current settings.

If **Same size** is set, the House Shapes percentages are ignored - use the **House Shapes** radio button to determine what shape of house to use.

Draw Gardens

Check this if you would like boundaries around each house delineating each house's property.

Street width and Distance from center of road



Type in values here. The Street Width should be greater than the maximum House Width or House Length settings.

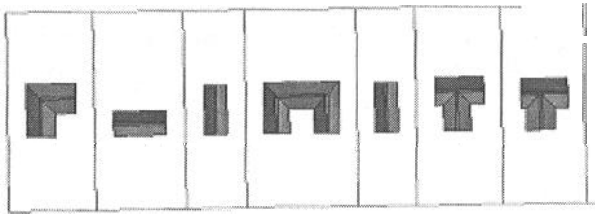
Random Street Options examples

When you want to use Random Streets, you first have to decide the look of the whole town. This will vary according to what era, symbol catalogs and

house settings you use. If your streets are fairly uniform, you should put less variation in house dimensions, styles and types.

The easiest way to learn to use the Random Street options is to experiment, but here are a couple of examples to get you started.

Example 1 – A modern well-to-do street



This is a new development with blue roofs. They don't have roof ridges, the houses are spacious and individual, detached with large gardens.

1 > Select the Random Street Options icon
You see the Street Options dialog box.

2 > We are only going to have one House Setting along this street, so select the Use default setting radio button. This means that only the current House Settings will be used.

3 > Click the House Settings button then pull down the House Settings list, choose Modern Blue and then select OK.

4 > The houses in the example street are individual and are not all aligned. They have gardens. Select the Draw gardens option, deselect Align to road and Same Size.

5 > They have hip roofs so select the radio button next to , the second roof type on the list.

6 > There is a wide variety of shapes. Starting at the top of the House Shapes, type in 20,10,25,25 and 20.

7 > The gap between each house is large but fairly constant. Type 50 in the Maximum distance and 45 in the Minimum.

8 > Set Houses on to Both sides.

9 > The House Length varies between 60 and 70, the Width between 30 and 40.

10 > These houses have reasonable sized gardens, so set the Street width to 250. The Distance from the of road is 30.

11 > Draw a street. You may wish to move the houses slight backwards and forwards for more variation.

Example 2 – a row of tightly packed village houses

In this example we have a small town which is built primarily of brown tiled buildings. A few have been retiled in the latest fashionable orange clay, and a few are still old-fashioned thatched cottages, The buildings are small and close together

1 > Select the Random Street dialog box. Select the Saved Settings button.

2 > There are three styles of houses, so check the first three check boxes in the Saved Settings group box.

3 > Pull down the settings in turn, choosing Brown (random Tiles), Orange (Square Tiles) and Thatched.

4 > Type in 70, 20 and 10 for the percentages of each type of house.

5 > Deselect Draw gardens and Same Size. Select Align to road.

6 > There aren't many fancy designs in this street so the House shapes percentages from top to bottom are 80, 0, 10, 0, and 10.

7 > These are small houses. The Minimum width is 15 and the Maximum 20. The Minimum length is 20 and Maximum 30. (The minimum length should be greater than the maximum width).

8 > The Distance between houses varies between 0 and 10 feet.

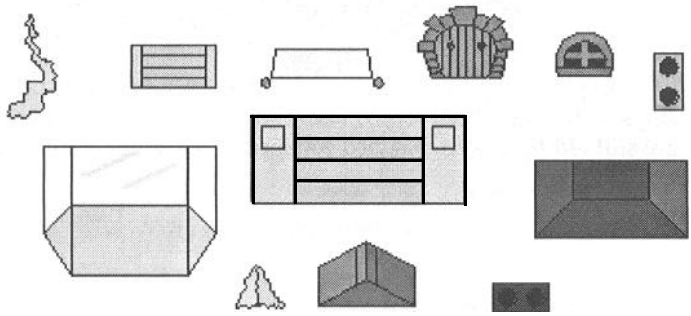
9 > The Street width is 35 (it should be greater than the maximum length) and the Distance from the center of the road is 10 feet. Set Houses On to Both sides.

10 > Draw a very short street, maybe three or four houses on each side of the road. This can take some time to calculate, although it redraws quickly enough after the first time.

Not so random

11 > To get a street of houses with identical dimensions, check the Same Size option. If you want terraced houses, set the Maximum and Minimum Distance between houses to 0. If you want them to be identical houses, check the Current Settings radio button.

Adding Frills ta Buildings

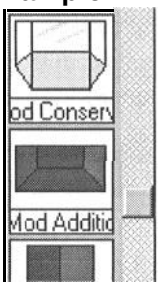


At the end each catalog, CD2 has some symbolsthat are designed to make buildings more interesting and complex. These include conservatories, dormer windows, smoke, chimneys, and roof holes. These come in three varieties:

- ✓ The first, like round chimneys or smoke are just normal symbols. They don't align to buildings because they don't need to. Just place them as you would any CC2 symbol.
- ✓ The second are extensions like conservatories, stairs or garages. They align to the edges of buildings. Just slide them round the building and place them when you are ready.
- ✓ The third are roof features like dormer windows align to the edge of the roof on the inside, then offset.

Some of CD2's building types such as Halfling dwellings and Thatched have non-straight outlines. If you move a frill over one of these outlines, the smart symbol aligns to the complex outline, making it flicker all over the place. However, we have added a simple outline to these building types just inside the main edge. It is called a frill track. It is not visible, but smart symbols will usually lock to it because it is behind the outline. If you have difficulty, zoom out a little or hide the STRUCTURES (SHADING) and STRUCTURES (COLOR) layers before placing frills.

Example 1 - A conservatory



1 < Place a building from t rn Blue catalog.

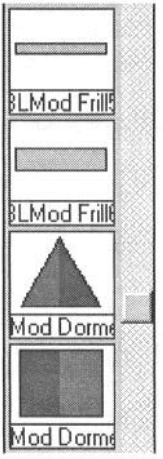
2 < Scroll down the symbo and pick the Mod Conservatory symbol. Move it over the edge of the blue building.

Notice how it aligns to the outside as your cursor moves just outside the edge.

3 < Place the conservatory.

Example 2 – a dormer window

Continued from the previous instructions.. .



4 ≺ Select the Mod Dormer 1 symbol .

5 ≺ Select it and move it over the edge of the blue building.
Notice how it aligns to the inside of the building.

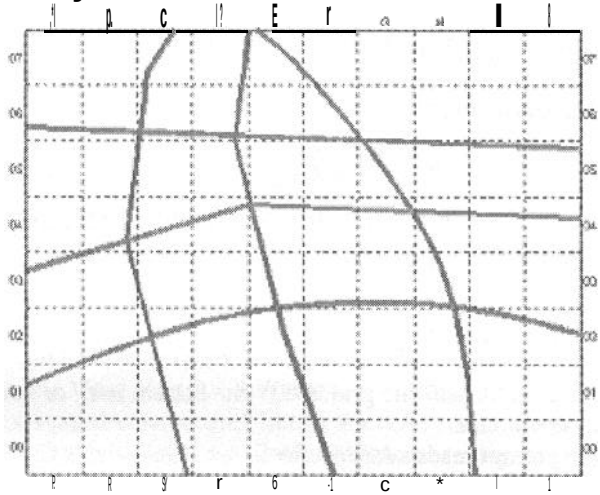
6 ≺ Place the dormer.
The prompt reads offset `from place point` [40] : .The frill now moves perpendicular to the roof edge on a cursor.

7 ≺ Select a point, type in a distance, or right click to accept the default distance. When you add the next dormer, use the default distance.

Adding information

When you've added your houses and decorated your buildings, you will probably want to add text labels to your drawing. Select a suitable layer and add text in the usual way. After this, you can add a reference grid and finally an index of the street names or other text in your drawing.

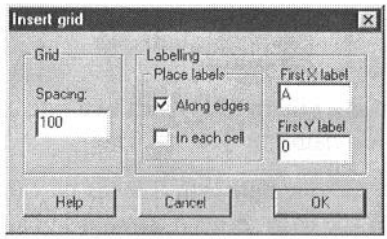
Grid overlays



A grid overlay is a grid of squares, optionally labeled along the axes or in each cell. This acts as a reference, enabling you to locate buildings easily. It has the current properties (color, layer, etc). You need to add a grid overlay in order to add an index of street names.

Grid Overlay dialog box

Click the Grid Overlay icon or select City Menu > > Add Grid Overlay to see the grid overlay dialog box.



Grid Spacing This is the size of each square.

Place Labels In each cell Check this to add text to the grid location representing each cell.

Place Labels Along edges check this to add labels along the edges of the grid.

First X label This is the first number or letter for the horizontal axes. You can start at any letter or number. Letters count up A-Z, then AA-AZ etc.

First Y label This is the first number or letter for the vertical axes. You can start at any letter or number. Letters count up A-Z, then AA-AZ etc.

To add a grid overlay

1 > Set the text height using .

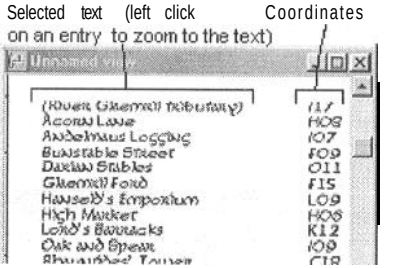
2 > Set the current layer, color and line style by clicking their indicators on the Status Bar.

3 > Click the **Add Grid Overlay** icon . Select the dialog box options. The prompt reads First corner of square `grid [ 0, 0]` .

4 > Right click to start the grid at 0,0 (the bottom left), or select a point with the mouse.
The prompt reads `second corner of square grid:.`

5 > Select a point for the top right of the grid.

Indexes



After you have added a grid overlay to act as a reference, you might wish to add an index of street names to your drawing.

Create Index adds an alphabetical index of text to your map. This consists of text that you have selected, arranged in alphabetical order with the Grid Overlay coordinates next to them. Clicking on the entries in the index zooms you to the appropriate place in the map.

To create an index

1 > Add a Grid Overlay if there isn't one present.
(If there is no grid overlay present when you get a message box which requests that you add one.)

2 > Choose a suitable text height and other options.

3 > Click Create Index then select the text you wish to add to the index (don't select the grid overlay).
You can see a box, which shows you the boundaries of the index.

4 > Place it on the map.

5 > Move the mouse over the index -you will see the finger cursor. Click on any entry to zoom to that entry.

Create index tips.

- ✓ The index is useful both on paper and on the screen. The coordinates let you know where to look on a print; the automatic zooming lets you zoom to the text.
- ✓ You can have your index always visible by giving it a window of its own. Use View Menu >> Window >> New Window. Create an index-shaped window and, in this window, zoom into the index text. Select Options Menu > > Preferences and make sure that Maximized windows cover other windows is not checked, Finally, left click on the top edge of the main window. You can now left click on any entry and CD2 will zoom to the text in the main window.
- ✓ When you update your map with new text, you will have to update the Index, too. Erase the current index and add a new one.
- ✓ The index is a group. If you want to move the text around within it, you must ungroup it first.

Demographic information

Every building, whether a symbol or House can have a solid color. This color is usually hidden, but by selecting City Menu > > Layers > > All BLDNGS with Color, you can see the color information. When you first insert a symbol or house, its color is the current color. However, CD2 can automatically change the color according to which layer you have placed your house.

NOTE: Don't use Change Layer to change the layer of buildings, or Change Color to change their color, as this will affect all the entities in the building. Use City Menu >> Change house layer and Color buildings instead, as they only affect the demographic information.

Change house layer

If you haven't placed your buildings or houses on the correct layer to start with, you should use Change House Layer to set a suitable layers for them,

Change House Layer changes the demographic layer of buildings. The buildings can be symbols or those created with the House command. It should be used in preference to Change Layer.

Symbols: Change house layer changes the symbol reference's layer. leaving the symbol definition intact.

Houses: Change house layer changes the layer of the solid colored entity that is used for demographic information. The other layers are left intact.

Color buildings

Color buildings lets you add a solid color that can be hidden to your buildings. The color is set according to the building's layer. The buildings can be created with the various CD2 Symbol Catalogs that are available, or with the HOUSE command. You can also use it as a way of coloring everything in your drawing on a particular layer, not just houses

Color Buildings is a way of adding demographic information to your maps. For example, you could make all the buildings on the BLDNG (RELIGIOUS) layer one color, and all those on the BLDNG (GM) layer another. All this information can be hidden from players.

The layers that are affected and the colors that are set are saved with the drawing; CD2's templates have a suitable set of options saved with the drawing.

To color your buildings

1 > If your buildings are not on the correct layers (the BLDNG layers), use City Menu > > Change house layer to correct this.

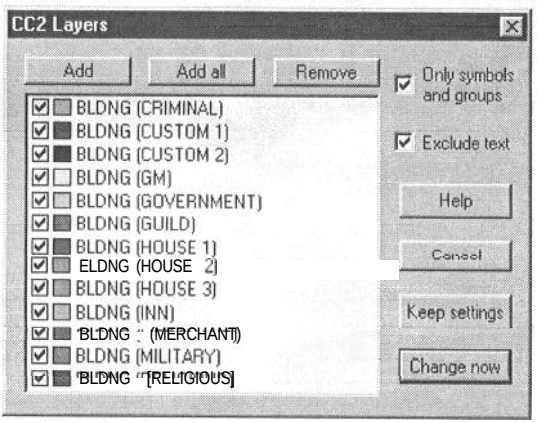
2 > Select the Color Buildings icon .
You can see a dialog box with various layers and colors. These are the default settings.

3 > Select the Change Now button.

4 > To see the effect of your efforts, select City Menu >> Layers> > All BLDNGs with Color. This hides all the roof tops and lets you see what color the buildings are.

The Color Buildings dialog box

To get this dialog box select the Color Buildings icon or City Menu >> Color Buildings.



Add Adds a selected layer in the drawing to the list of layers that can be colored.

Add All Adds all the layers in the drawing to the list of layers that can be colored.

Remove Removes a selected layer in the drawing to the list of layers that can be colored

Only symbols and groups Select this option if you only want your houses and buildings to be affected.

Exclude Text Check this option if do not want the text in your drawing to be colored. Note that this only has an effect if the Only symbols and groups option is not selected.

Keep Settings This keeps any changes you have made to the current Color Layer settings and closed the dialog box.

Change Now This changes the color of entities in the drawing according to the options in this dialog box.

Include Layer check box - This includes the checked layer as one to be colored.

Color boxes These show the color that entities on each layer will be changed to, if the check box is ticked. Click on this and choose a color from the color dialog box to select a color for the selected layer.

Layer name This lists all the layers that can be included in the layer coloration.

NOTE: If no layers appear in this dialog box, it means that you are not using a city template. If you are drawing a city, we suggest that you cut and paste the drawing into a new drawing based on a city template. Otherwise, just use **Add** and **Add All** to add the layers you would like affected.

ADVANCED GUIDE

Layers

City Designer 2 templates have lots of pre-defined layers to make it easy for you to create your urban areas. The demographic information is stored on the various BLDNG layers, the rest of the houses on the various STRUCTURES layers. Because CD2 uses multi-layered buildings, it has its own Change house layer command on the City menu.

BLDNG layers

Use these to add your house and city symbols if you want your maps to contain demographic information. Use Color buildings to add the demographic information.

STRUCTURES layers

These are used to contain the various parts of houses added using symbols and created using the HOUSE command.

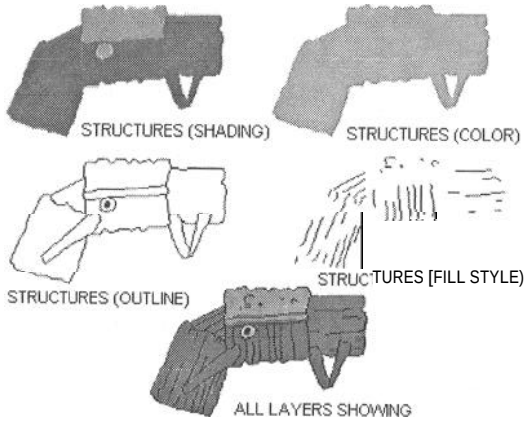
LAYER	PURPOSE
STRUCTURES (COLOR)	Used by Symbols only. Show it if you want to see demographic information.
STRUCTURES (FILL STYLE)	Used for roof hatching in symbols and Houses. Hide this for a faster redraw.
STRUCTURES (SHADING)	Contains the solid filled area of roofs. Hide this to see demographics.
STRUCTURES (OUTLINE)	Shows a line outline of the building.

CD2 Symbols

When you place a symbol, what you see is a reference to the symbol in the drawing. This reference is placed on the current layer. If you select entities on this layer, any symbols you have placed on the layer will be selected. If you hide the layer, all references on that layer will be hidden, even those parts of the symbol on visible layers.

In addition, however, symbol definitions contain entities that have layers. If you hide these layers, they will be hidden in any references in the drawing as well.

City Designer 2 symbols are drawn on various layers, shown below,



The STRUCTURES (COLOR) layer has a solid tilled color silhouette on it that is the same color as the symbol reference. If you use Color buildings it is the color of this part of the symbol that is changed.

CD2 Houses

Houses share most of their layers with CD2 symbols. There are two important differences. When you draw a house, there is a solid filled area placed on the current layer that is used for demographic information. This is instead of the STRUCTURES (COLOR) layer used in symbols. Hiding this layer does NOT hide the whole house.

Changing the layer of buildings

Because CD2's Houses are multi-layered, a normal change layer would just change the layer of all the entities in the house. CD2 has a special command called CHANGE HOUSE LAYER that specifically allows you to change the layer of the demographic information in your houses. It also works on House symbols. So use City Menu >> Change house layer rather than Change layer.

Controlling layers

Layers can be controlled from the layers dialog box, but CD2 gives you a few shortcuts that might help. These are found on the Layers submenu of the City menu.

This submenu includes three shortcut macro commands that make it easy to control the appearance of your drawing. They only function on City templates; otherwise you get a series of error messages, telling you that various layers don't exist.

All BLDNGs with shading shading

This shows all the entities on the various BLDNGs layers. It also shows the roof shading of the buildings, obscuring the demographic information added with Color buildings. These produce maps for your players.

All BLDNGs with color

This shows all the entities on the various BLDNGs layers. It also hides the roof shading of the buildings, showing the demographic information added with Color buildings. If the current layer is the STRUCTURES (COLORS) layer, it remains visible.

Hide all BLDNGs

This hides all the BLDNGs and STRUCTURES layers. If the current layer is a STRUCTURE5 or BLDNGS layer, it remains visible.

Creating an angular grid

In order to use CD2's **Grid Angle** feature, the current grid needs to be an angular grid. CD2's templates include many angular grids, but you may wish to edit these or create your own.

To create an angular grid

1 > Right click on the **Grid** button.

2 > Select **New** then select **Angular Grid**. Choose your options from the dialog box. The **Rotation from the XY plane** should be 0.

To edit an angular grid

1 > Right click on the **Grid** button.

2 > Select the grid you want to edit then click **Edit**. Choose your options from the dialog box.

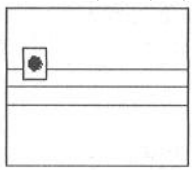
For information on the various dialog box options, see Edit *Angular* in the help file index.

Symbols

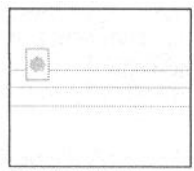
Creating building symbols

Creating city symbolsrequires knowledge of symbol creation and editing. See your CC2 manual for more details.

STRUCTURES (OUTLINE) layer



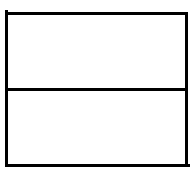
Create an outline.



Copy the outline then erase internal detail

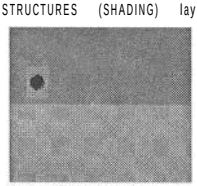
STRUCTURES (COLOR) layer

Add a solid fill style and make the area Color of SymRef



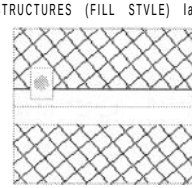
Divide the outline up into polygons

STRUCTURES (SHADING) layer



then add color and solid fill to make the roof shading

STRUCTURES (FILL STVLE) layer



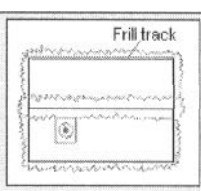
Finally add fill style.

Drawing the outline

1 > Start a drawing based on the blank template in CC2's Cities/Symbols folder.

2 > Draw the outline of your building on the STRUCTURES (OUTLINE) layer. Use a black, hollow polygon if possible. Use grid and snap to make sure that everything is closed precisely.

3 > If you are using complex outline, like Thatched, you will have to draw a simple shape inside the main shape. This will enable building frills to "lock" to the building.



This is an outline placed just inside the edge of buildings with complex outlines to allow frills and extensions to attach correctly to the edge of such buildings.

Drawing the solid area

Each symbol has a solid silhouette used by the Color buildings command to give each building a color according to its layer. You need to add this to your symbol.

4 > Copy the outline you just drew and change its layer to the STRUCTURES (COLOR) layer. Change the fill style of the copy to Solid.

5 > If you are using an outline consisting of more than one entity, you will have to use multipoly then change the layer of the multipoly to the STRUCTURES (COLOR) layer.

6 > Select Symbols Menu >> Change to SymColor and select the filled area. This changes the color of this area so that when you insert the symbol, this layer appears in the current color.

Add the Shading

7 > Set the layer to the STRUCTURES (SHADING) layer. Add the roof shading over the outline using one or more polygons.

8 > If necessary, use multipolies created from the outline with any internal lines added to make complex shaded areas.

Add Roof Hatching

9 > Set the layer to STRUCTURES (FILL STYLE). Add any roof hatching, such as tiles.

Arranging the layers

The layers should be arranged in the following order:

STRUCTURES (COLOR) at the back

STRUCTURES (SHADING) next

STRUCTURES (OUTLINE) next (except any frill track)

STRUCTURES (FILL STYLE) last.

Finally, if you have drawn a complex outline, you will have to send the frill track to the back. Use Front and Back to order the layers.

Defining the house symbol

10 > Rotate the building so that the side that would face the road is facing down the screen.

11 > Select Symbols Menu> Control Points and add the first control point in the bottom left corner of the symbol's extents, and the other in the bottom right. (You can work out the symbol's extents by imagining a box drawn round the symbol that just encloses it.)

Control Points

This entity type is found in symbol definitions – add them from the Symbols menu. They are used to control the "smart" behavior of symbols. Symbols with control points added can optionally:

- ✓ Align to entities (all smart symbols).
- ✓ Cut gaps in entities (e.g. doors, windows).
- ✓ Offset from entities (buildings offsetting from roads).
- ✓ Scale Y to fit (Windows can expand to the width of walls).
- ✓ Keep the current symbol scale or ignore it.

12 > Select Align on Insertion, Keep DynTrack Scale, and Offset from Place point. The other options should be unchecked.

13 > Select Symbols Menu >> Define Symbol. Type a name then select an origin point on the midpoint of the control point you just added.

Creating frill symbols

As well as creating house symbols you can also create your own building frills. They are drawn just as you would draw for buildings, but they have slightly different control points.

Draw the frill using the method described for creating building symbols, up to the point that you define the symbols.

Defining simple frills

× = symbol origin

Symbols such a round chimneys (which look the same no matter which way they are aligned) and smoke (which shouldn't align, as they should not be rotated) should be defined without any control points.

1 < Align the frill so that it is facing the direction you would like it to face on a city. For example, smoke would go up the screen.

2 < Select Symbol Menu >> Define Symbol. Give the symbol a name. Select an appropriate origin (e.g. for a round chimney, the center of the chimney, for smoke, at the base).

Defining frills that go outside buildings

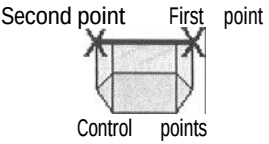
X = symbol origin

Symbols such as conservatories or awnings need to align to the outside of buildings, but unlike building symbols, they don't need to offset. Once you've placed them, they stay put.

1 > Align the symbol so that the part that faces the building edge goes up the screen.

2 > Select Symbols Menu >> Add Control Points. These are drawn from right to left along the edge of the symbol that will align with the building.

3 > Select the Align on Insertion and Keep DynTrack Scale options. Uncheck the others. These control points align to other entities, but should not offset.



4 > Define the origin as the center of the control points.

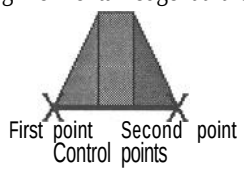
Defining frills that go inside buildings

X = symbol origin

Place symbols such as roof windows and square chimneys by selecting a roof edge then offsetting the symbol inside the building.

1 > Align the symbol so that the side that faces the roof edge is facing down the screen.

2 > Select Symbols Menu >> Add Control Points. These should run from left to right along horizontal edge at the bottom of the screen.



3 > Select the Align on Insertion, Keep DynTrack Scale and Offset from place point options. Uncheck the others. These control points align to other entities and then offset.

Other types

There are other possibilities. For example, you might want a vehicle symbol where the control point faced up the middle of vehicle, so that it could align to the road. Maybe this could be offset too so that it could be placed on one side of the road.

Making a symbol from a House

Symbols and houses are created in different ways, and have some layer differences, but its not that hard to use the HOUSE command to make a symbol that you can use again. Most of the work has been done for you.

Creating a symbol from a new house

This is far easier than defining a symbol from a house in an existing drawing.

1 > Start a drawing based on the blank template in the Cities/Symbols folder.

2 > Set the current layer to STRUCTURES (COLOR).

3 > Draw the house, adding extensions. Select Insert Menu >> Ungroup and ungroup the house.

4 > Add any frills that you want then Edit Menu >> Explode them.

5 > Select Symbols Menu >> Change to selecting by Layer, STRUCTURES (COLOR). This adds the demographic information.

6 > See Defining the Symbol (below) to see how to define the symbol.

Creating a symbol from an existing house

1 > Copy the house to the clipboard. Paste it into a new drawing based on the blank template in the Cities/Symbols folder.

2 > Select Insert Menu > > Ungroup and ungroup the house. Do this again. (The house may be grouped twice because you have inserted it from the clipboard).

3 > Select Info Menu > > List and choose the edge of the house. The first thing listed must be changed to the STRUCTURES (COLOR) layer. Usually, it can be selected by layer.

4 > Select Symbols Menu >> Change to SymColor. Select by layer, STRUCTURES (COLOR). This adds the demographic information.

Defining the symbol

1 > Rotate the building so that the side that would face the road is facing down the screen.

2 > Select Symbols Menu >> Control Points. For the first control point, select the bottom left corner of the symbol's extents. For the second control point, select the bottom right corner of the symbol's extents.

3 > Select Align on Insertion, Keep DynTrack Scale, and Offset from Place point. The other options should be unchecked.

4 > Select Symbols Menu >> Define Symbol. Type a name then select an origin point in the midpoint of the control point you just added.

Creating House Styles

CC2 comes with many pre-defined house styles; but if this isn't enough you can define your own.

The Default house style is hard-coded into CD2. It produces house with straight edges, rectangular roof edges and a fill style that was used for TSR's Forgotten Realms Atlas.

Starting a new house style

All the other House Styles are defined in CC2 files stored in the Symbols\Cities\House Styles folder. By adding entities to a file in this folder, you can create your own house styles. You can open blank.fcw from the Symbols\Cities\House Styles folder to start a new House Style drawing. You could also open an existing similar house style file and work on that instead.

This drawing has many layers: adding entities to these layers has a different effect on the house style. If you don't add anything to a particular layer, then CD2 uses the default style. For example, if you add nothing to the ROOF EDGE layers, you will get straight roof edges.

Defining a roof edge

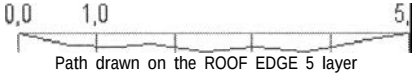
CD2 makes Roof edges by repeating a 5' section, then adding and scaling a 1' section. These sections must be made from continuous lines or paths.

For example, if you drew a 33' long roof, CD2 would join 6 of the 5' sections and add 3 of the 1' sections. The 5' section is drawn on the ROOF EDGE 5 layer, the 1' section on the ROOF EDGE 1 layer. If you don't draw anything on these layers, CD2 defaults to a straight edge.

1 > The current layer is ROOF EDGE 5. Snap is on. Select the Path icon.

2 > Start the path at 0,0. At this stage you can turn Snap off if you want an irregular house edge.

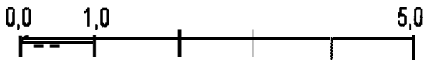
3 > Continue the path, staying below the gray line (Y axis) until you near 5.0.



Path drawn on the ROOF EDGE 5 layer

4 > At this point, either turn Snap on and select the grid point at 5,0 or type 5,0 and press Enter.

5 > Set the layer to ROOF EDGE 1. Optionally, hide ROOF EDGE 5. Start a Path at 0,0 draw below the gray line and end up at l,O.



Path drawn on the ROOF EDGE 1 layer

Defining the Roof External section

The Roof External section determines the appearance of the short ends of gabled building types and the edge of the roof ridge (unless you have draw on the ROOF RIDGE layer, too). This allows you to create houses with solid roof ridges, such as Thatched. These are drawn in exactly the same way as roof edges, with a 5' section on the ROOF EXTERNAL 5 layer and a 1' section on the ROOF EXTERNAL layer.

Defining the Roof Internal section

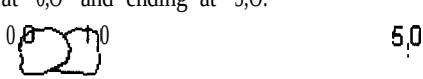
The Roof Internal section determines the appearance of the internal lines of the building These are drawn in exactly the same way as roof edges, with a 5' section on ROOF INTERNAL 5 layer and a 1' section on the ROOF INTERNAL 1 layer.

Defining the Roof Ridge

If you want a roof ridge that consists of repeating sections (like roof tiles, slates or whatever), draw it in two sections, a 5' section on the ROOF RIDGE 5 layer and a 1' section on the ROOF RIDGE 1 layer. These must be drawn with polygons.

5 polygons drawn on the ROOF RIDGE 5 layer

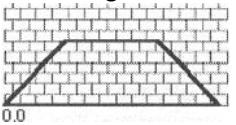
1 > Make the ROOF RIDGE 5 layer current. Draw a series of polygons or boxes, starting at 0,0 and ending at 5,0.



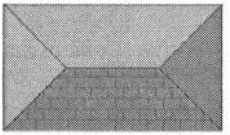
2 polygons drawn on the ROOF RIDGE 1 layer

2 > Make the ROOF RIDGE 1 layer current. Draw a series of polygons or boxes, starting at 0,0 and ending at 1 ,0.

Defining the Roof Hatching



CD2 applies the roof shape to the HATCHING (DARK) area



The result on an Orange Square Tile house.

Roof hatching is the fill pattern found on roofs. Each different area of the roof can have a different hatching pattern. If you don't add anything to the roof hatching layers, you won't get roof hatching. CD2 starts at 0,0 and puts whatever is there in the lower left corner of the area to be hatched. It then works right, adding and trimming entities that fall within the roof boundaries.

The pattern does not tile. This prevents huge roofs being added to drawings accidentally.

The easiest way to see how to draw roof hatching is to look at the examples in the Symbols\Cities\House Styles folder.

Hatching can be drawn using any entities that can be trimmed, but we recommend that you avoid ellipses and very complex shapes, as they will take a long time to trim when you insert a house using this house style.

- ✓ Draw on the HATCHING (DARK) layer for the hatch pattern for the Dark colored roof areas,
- ✓ Draw on the HATCHING (MEDIUM) layer for the hatch pattern for the Medium colored roof areas,
- ✓ Draw on the HATCHING (LIGHT) layer for the hatch pattern for the Dark colored roof areas.
- ✓ Draw on the HATCHING (FLAT ROOF) layer for the hatch pattern for the Flat Roof areas.

Just set the appropriate layer then add entities.

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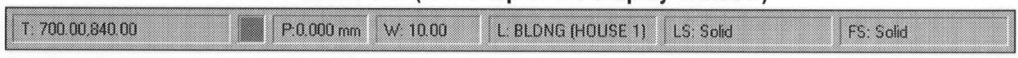
The Status Bar (at the top of the Display Window)



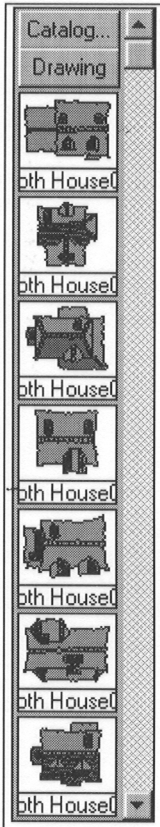
Tracking Indicator
Displays the cursor co-ordinates. Click to cycle between absolute, relative and polar tracking.

Color Indicator
Pen Thickness
Line Width Indicator
Click to change the current setting.

Layer Indicator
Click to change layer settings.

Line Style Indicator
Click to set the current line style.

Fill Style Indicator
Click to set the current fill style properties.



The Catalog Window

Load new symbol catalogs with the catalog shortcut icons, or by clicking **Catalog...** .

Click **Drawing** to show the symbols used in the drawing instead.

Right click over the Catalog Window to swap between normal and full-screen view.

Click symbols then place them on the map.

To **resize** symbols either:

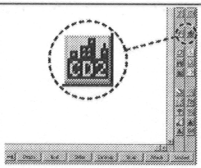
- ✓ Press Ctrl while moving the mouse slowly forward or backwards (if Snap is enabled, the resize will be jerky), or
- ✓ Right-click then type exact values for the X and Y scale.

To **rotate** symbols either:

- ✓ Smart Symbols automatically align to edges under the cursor.
- ✓ Press →, ←, ↑ or ↓.
- ✓ Press Ctrl and Shift together while slowly moving the mouse.
- ✓ Right-click then type an exact value for the rotation angle.

To **stop** placing a symbol either:

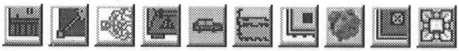
- ✓ Click another symbol or icon.
- ✓ Right-click then click **Finished**.
- ✓ Press the Esc key.



The CD2 icon

Loads the City menu and city icons in the right-hand icon bars. Click here again to return to CC2.

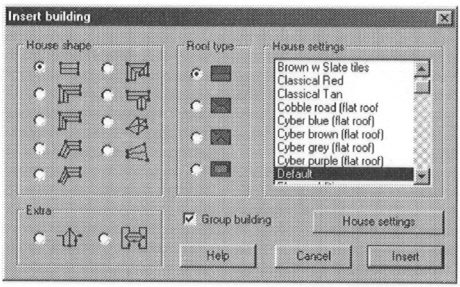
The catalog shortcut icons



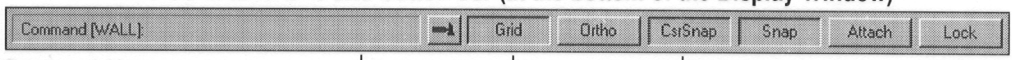
Each cycles through two or three symbol catalogs and sets the House Builder to suit the style.

House Builder Icon

Lets you draw Houses with a few clicks. Select your settings in the dialog box then click **Insert** to start drawing. The Command Line tells you which house point to place next.



The Command Line and Button Bar (at the bottom of the Display Window)



Command Line
Says what CC2 needs next. The word in brackets is what CC2 will do if you right-click or press Enter.

You can type in the text equivalent of any command, numbers, distances or coordinates. For example:
`LINE 10,0 @20',0` draws a line from (10,0) at 20 feet across and 0 up.

Tools button
Controls which icon bars and screen features are visible.

Ortho button
When depressed this forces lines to be horizontal or vertical.

Attach button
Locks points to other entities, as per the current attach mode.

Right-click to change attach mode.

Grid, Snap & CsrSnap buttons
When **Snap** is enabled, you can only place points on the grid.

When **CsrSnap** is enabled, the cursor jumps between snap points.

When **Grid** is enabled, the grid is visible as an array of black dots.

Right click on any of these buttons to change the current grid settings.